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An Examination of Primary Care Providers' Assessment and Plan of Care for Children and Adolescents Who Are Overweight or Obese

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The document mentioned above has been reviewed and accepted by the student's advisor, on behalf of the advisory committee, and by the Assistant Dean for MSN and DNP Studies, on behalf of the program; we verify that this is the final, approved version of the student's DNP Project including all changes required by the advisory committee. The undersigned agree to abide by the statements above.

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An Examination of Primary Care Providers' Assessment and Plan of Care for Children and
Adolescents Who Are Overweight or Obese

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University of Kentucky

College of Nursing

Fall 2018

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Dedication

I would like to dedicate this body of work to my beautiful wife, Meredith, and my dog, Murphy. I would also like to dedicate this project to my parents, Joe and Maria, as well as my in-laws, Mike and Peggy Ranney. Finally, I would like to dedicate this dissertation to the families and patients who allowed me to be part of their care.

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Introduction to Final DNP Project

Kevin J Pinto

University of Kentucky

Childhood and adolescent obesity is a significant public health crisis. In the United States, the percentage of children and adolescents who are obese has more than tripled since the 1970s. Currently in the United States, one in five children is obese (6 to 19 years of age) (Hales et. al., 2017; Skinner et. al., 2018). Obesity is defined as a body-mass index (BMI) greater than or equal to the 95th percentile for age and sex on the Center for Disease Control (CDC) growth charts and severe obesity is defined as a BMI at or above 120% of the 95th percentile for age and sex. The United States has seen an increasing trend in the prevalence of obesity. The CDC surveys biometrics biannually via the National Health and Nutrition Examination Surveys and reported that the prevalence of obesity from 2015-2016 was 18.5% and severe obesity was 6.0% (Skinner et. al., 2018). Obesity rates in children from 6 to 11 years old increased from 11.3% (between 1988 to 1994) to 17.4% (between 2013 to 2014); obesity in adolescents from 12 to 19 years old increased from 10.5% (between 1988 to 1994) to 20.6% (between 2013 to 2014); and severe obesity in adolescents increased from 2.6% (between 1988 to 1994) to 9.1% (between 2013 to 2014) (Ogden et. al., 2016). Adding to this, children are defined as overweight if they reach BMI percentiles in the range of 85 to 95% (Ogden, 2010). Prevalence of being overweight among children 2 to 19 years old increased from 9.2% (between 1976-1980) to 16.2% (between 2013 to 2014) (Fryar, 2016). In total, the prevalence of being over the 85th percentile for age and sex (overweight or obese) increased from 28.8% (between 1999-2000) to 35.1% (between 2015-2016) (Skinner et. al., 2018).

When we further unravel the data about childhood obesity and look at not only prevalence, but also incidence, some interesting trends begin to emerge. With children between 5 and 14 years old, incident obesity was more likely to have occurred at younger ages, especially when looking at the subset of children beginning kindergarten overweight (Cunningham et. al.,

2014). This data tells us that in regards to childhood obesity, it is important to take note of the incidence so that the most effective primary and secondary prevention strategies can begin at the appropriate time interval. We need to elucidate at what age children are vulnerable from tipping the scales from overweight to obese. Other results from the study included: higher prevalence among Hispanic children, lower prevalence in children from the wealthiest 20% of families, the highest incidence at the youngest ages, and almost half of the incidence occurring in the 14.9% of children who were overweight to begin with in kindergarten (Cunningham et. al, 2014).

These results corroborate recent data that showed an increase in prevalence of children 2-5 years of age who are obese from 8.3% (between 2011-2012) to 13.7% (between 2015-2016) (Skinner et. al., 2018). Knowing that higher prevalence and incidence occurs within certain subsets of children and adolescents, the presented research is important in that it analyzes how providers are caring for different groups and discusses how improvements might be made to combat the childhood obesity epidemic.

Why should primary pediatric practices be responsible for the surveillance and identification of overweight and obese children? Pediatric practices are one of the few objective voices in the child's life that follows them in the family setting in a longitudinal manner; they are aware of family intricacies and can play to the families strengths and weaknesses (Daniels et. al., 2015). Although there has been mixed data analyzing the surveillance efforts in clinics, it is clear and recommended that kids' BMI be plotted and discussed at every health care visit so that interventions can be implemented when primary care providers (PCPs) first begin to notice rising BMI percentiles that cross thresholds (Daniels et. al., 2015). It is not enough to assume that PCPs are consistently addressing this important issue. Before any interventions can be implemented, the management of obesity must first begin with prompt identification and diagnosis (O'Brien,

Holubkov, & Reis, 2004). It was found in one academic primary care center that providers had only documented obesity 53% of the time in their assessment and mentioned it only 39% of the time in the physical examination (O'Brien, Holubkov, & Reis, 2004). It is also important to note from this study that obesity identification rates were lowest among preschool children (31%) and highest among adolescents (76%) (O'Brien, Holubkov, & Reis, 2004). In a comparative study where higher rates of identification and early intervention for failure-to-thrive children versus obese children were observed, the argument is made that earlier identification is needed for children who are overweight and obese since primary prevention is the crux of pediatric medicine (Miller et. al., 2002; Grossman et. al., 2017). The same issues plague the adult world where only 42% of obese patients revealed that their provider discussed losing weight in their plan of care (Galuska et. al., 1999). Clearly, there exist many barriers to accurately diagnosing and developing a proper plan of care with patients.

From an objective, technical point of view the US Preventive Services Task Force (USPSTF) recently released a statement that recommends PCPs should screen for obesity in children six years and older and have a plan for them that consists of either offering or referring to behavioral interventions aimed at improving weight status (Grossman et. al., 2017). This group also noted the importance of identification not just because of the prevalence and comorbidities associated with obesity, but also the mental health issues that may arise from being bullied or teased (Grossman et. al., 2017). In investigating the literature, they found little evidence to back up any pharmacological treatments. They found moderate evidence to support comprehensive, intensive behavioral interventions that involve the families and consist of a minimum of 26 contact hours (Grossman et. al., 2017). The large number of contact hours recommended can place a large strain on a primary care clinic that might have difficulty in

having the availability of time or in receiving sufficient reimbursements from insurance companies, which often means that referrals have to be made to pediatric subspecialty clinics like a High BMI clinic. In many rural communities, referring to these distant pediatric subspecialty clinics places a great burden on the family and is not a feasible option.

Purpose

The purpose of this project was to examine how often pediatric PCPs diagnosed overweight or obesity and created a plan of care for children 6 -17 years of age who are overweight or obese. In addition, facilitators and barriers to diagnosing and creating a plan of care with families was studied using a survey emailed to pediatric PCPs in the general pediatric clinic.

Three objectives were created to fulfill the purpose of the study. The first objective was to determine the frequency of proper diagnosis of childhood overweight or obesity (according to the CDC definition) documented in the well child assessment of children 6-17 years of age by their primary care provider. The second objective was to determine the frequency of a documented plan of care addressing overweight or obesity identified during a well-child visit of children 6-17 years of age. The third objective was to explore barriers and facilitators identified by PCPs impacting the diagnosis and treatment of overweight and obesity in children within a pediatric primary care setting.

Methods

This study consisted of a retrospective chart audit of patient data addressing the first two objectives and an electronic mail survey with the PCPs in the clinic addressing the third objective. The chart audit was performed at the University of Kentucky Healthcare's General Pediatrics Clinic in Lexington, Kentucky. The retrospective chart audit of patient data from Allscripts AEHR was performed using a univariate descriptive design. The univariate descriptive design involved a random selection of charts for patient encounters during well-child checks from February 1, 2017 to February 1, 2018 using the ICD-10 and CPT codes for well-child

checks, which are specifically Z00.121/Z00.129 and 99383/99384, respectively. Inclusion criteria for the chart audit included ages 6-17 years of age, present for a well-child check, and the date of visit from February 1, 2017 to February 1, 2018. Exclusion criteria for the chart audit included less than 5 years of age or older than 18 years of age, not present for a well-child check, and outside of the date range. After IRB approval, the clinic manager obtained the charts using the inclusion and exclusion criteria through the Kentucky Medical Services Foundation. The charts were first collected by age groups and then randomly selected. The chart audit was performed within the confines of the clinic and data was collected using a chart audit tool (appendix A) that did not record any identifiable information. Data collected included: age, gender, race, height, weight, BMI, BMI percentile, age of onset of overweight or obesity, weight related diagnoses in the problem list, age the child was first diagnosed with being overweight or obese, insurance type, diagnosis of overweight or obesity in assessment section of PCP note, treatment plan options discussed in the plan section of the PCP note, and referral to a pediatric subspecialty clinic related to being overweight or obese that included the High BMI clinic, lipid clinic, adolescent clinic, endocrinology clinic and nephrology clinic (See appendix A: Chart Audit Tool). Once again, the cutoff for overweight was a BMI from the 85th to the 95th percentile for age and sex and the cutoff for obese defined as a BMI greater than or equal to the 95th percentile for age and sex on the CDC growth charts. The first objective looked for a weight-based diagnosis in the provider's assessment and included the ICD-10 codes of overweight (E66.3), morbid obesity due to excess calories (E66.01), other obesity due to excess calories (E66.09), and obesity, unspecified (E66.9). A statistical analysis was performed using SPSS. Frequencies and proportions were calculated to determine the frequency of physicians' accurately diagnosing overweight or obesity on their assessments. A Chi-square test of

independence was performed to compare frequency of assessment diagnosis, a documented plan of care, and referral to a subspecialist of overweight versus obese cases. A Mann-Whitney test will be used to compare frequency of assessment diagnosis and a documented plan of care in different age groups.

The online survey was developed using Qualtrics and was distributed via electronic mail by the clinic manager to pediatric PCPs. Inclusion criteria included being on the email list serve as a primary care provider for the clinic. Exclusion criteria included not being on the email list serve, not being literate in English, and not having access to the Internet to complete the online survey. The survey included questions related to the facilitators and barriers of the assessment, diagnosis, and development of a plan of care for children who are overweight and obese (See appendix B: Provider Survey). The survey was sent out to all providers who perform well-child checks as identified by the clinic manager. A two-week window was opened to complete the survey with a one-week reminder distributed via the electronic mail list serve. A random drawing for a gift card was performed to help encourage voluntary participation.

Results

The retrospective chart review sample consisted of 140 pediatric patients (sample demographics in table 1). Forty-six (32.9%) of these patients were overweight and ninety-four (67.1%) were obese. Seventy-two of these patients were female and sixty-eight male. Forty-five were African-American, fifty-two were white, thirty-seven Hispanic, and six were other. Table 1 shows the similar frequencies of the age groups with a range of 22 to 26 samples per subset. Twenty-one had private insurance and one hundred and nineteen had public insurance. The average BMI of the total set is 95.56 with a standard deviation of 3.63.

Table two shows the subsets of overweight versus obese patients and the provider frequencies of diagnosis in the assessment, a documented plan of care, and referrals to a subspecialist. Children who met the BMI criterion for overweight had a weight-based diagnosis documented in their assessment 17.4% of the time, a plan of care 13% of the time, and a referral made to a subspecialist 2.2% of the time. Children who met the BMI criterion for obesity had a weight-based diagnosis documented in their assessment 69.1% percent of the time, a plan of care 67.0% percent of the time, and a referral made to a subspecialist 27.7% of the time. A Chi-square test for independence indicated a significant association between weight class (obese versus overweight) and a proper diagnosis in the providers' assessment, $\chi^2(1, n = 140) = 33.2, p = .000$. A Chi-square test for independence indicated a significant association between weight class and a documented plan of care, $\chi^2(1, n = 140) = 36.0, p = .000$. A Chi-square test for independence indicated a significant association between weight class and a referral to a pediatric subspecialist, $\chi^2(1, n = 140) = 12.9, p = .000$.

Table three shows the age subsets versus provider frequencies of diagnosis in the assessment, a plan of care, and referrals to a subspecialty. There were no statistically significant differences between the age groups, even when comparing younger (6-11 years of age) versus older subsets (12-17 years of age). A Mann-Whitney U Test revealed no significant differences in the providers' frequency of proper diagnosis in the assessments of younger ($Md = 68.0, n = 113$) and older groupings ($Md = 81.0, n = 27$), $U = 1240.5, z = -1.527, p = 0.127, r = 0.13$. A Mann-Whitney U Test revealed no significant differences in the providers' documented plan of care of young ($Md = 687.2, n = 71$) and older ($Md = 73.9, n = 69$), $U = 2218, z = -.979, p = 0.328, r = 0.08$.

Five of thirty-eight providers responded to the survey for a response rate of 13.2%. Four were female and one male. Average age was 47.4 years with a range from 33 to 62. Average years in practice was 12.6 years with a range from 1 to 34. Providers identified barriers to diagnosing children as overweight or obese. These included time available for counseling (4/5), lack of reimbursement (2/5), loss of motivation from frustration by patient's response to prior efforts (3/5), and concern about damaging a child's self-esteem or hurting their feelings (2/5). Other comments brought forward concerning barriers included lack of easily accessible or useful handouts, lack of family follow-up, lack of community support resources, lack of time to assist with patient-centered management, and lack of continuity of providers in follow-up. When asked how likely they were to provide written information on obesity and weight loss, four were extremely likely and one was neither likely nor unlikely. When asked how likely they were to create a follow-up appointment, two were extremely likely and three were somewhat likely. The average number of contact hours providers felt was sufficient to influence the BMI of a child who is overweight or obese was five hours, with a range from two to ten hours. All five providers were somewhat likely to refer to the High BMI clinic. Three providers were somewhat likely to refer to any subspecialty clinic, one was neither likely nor unlikely, and one was somewhat unlikely. The clinic facilitators identified as influencing care of the overweight or obese child included: availability of handouts and patient information, lipid clinic in house, lab work in house, developed patient care plans, and the availability of the High BMI clinic. When asked what changes they would like to see, the providers suggested: development of community-based program involving the family, more time available for these visits, and better continuity of care where the same providers are seeing the same patients on follow-up.

Discussion

The results from the chart audit revealed that a good foundation exists for care provided to children who are overweight or obese. When compared to the University of Pittsburgh, one of the top academic centers in the United States, the pediatric primary care clinic at the University of Kentucky was found to have comparable results (O'Brien, Holubkov, & Reis et. al., 2004). In many of the charts containing a plan of care, an individualized obesity template was present within the plan section of the chart that included the categories: 'treatment goals we will work on together', 'patient preferences and functional/lifestyle goals', 'self-management plan – How will the patient help themselves meet their goal', 'barriers to meeting goals', 'motivation to achieve goal', and 'medication review'. Being within the enterprise of an academic center gave this clinic the advantage of having more personnel and time to spend with patients. Providers also had the luxury of being able to refer to a multitude of pediatric subspecialty clinics like the High BMI clinic, lipid clinic, adolescent clinic, endocrinology clinic and nephrology clinic. It was made clear through both the results and the survey that there is no discrimination in quality of care based on age. All age results had consistent frequencies in the domains of a diagnosis in assessment, a documented plan of care, and referrals to a subspecialist (table three).

An area of improvement would be the inconsistencies seen between the care provided for those children who are overweight versus obese. Vast differences existed between those children who had a BMI of 85% to less than 95% for age and sex versus those over 95%. Incidence of childhood obesity occurs at higher rates in the youngest age groups (Cunningham et. al., 2014). It is imperative that healthcare providers combat childhood obesity by developing a plan of care for those younger children who are overweight; a number of whom will become obese. Once a child becomes obese, it is much harder to lower and maintain a healthy BMI.

The provider questionnaire revealed a couple of poignant points related to facilitators. It was better for providers when families could come to the same place to see the same providers to get all the information and care they needed. Providers believe they would see improved fidelity in plan of care implementation from families if there existed better continuity of care. A provider also commented that a committee was working on a comprehensive multi-disciplinary clinic to care for obese children including exercise programs and group therapy sessions.

As evidenced by the recent data suggesting there is not yet a plateau in the overall prevalence of children and adolescents who are overweight or obese, the public health response to this epidemic has failed (Ludwig, 2018). This epidemic is an intricate, multidimensional problem that must be solved using a multilevel approach (Gurnami, Birken, & Hamilton, 2015). In the microsystem of the clinic, this translates to evidence-based practice. PCPs need to continue to provide anticipatory obesity prevention guidance at well-child checks, which should include screening children at least six years and older (Grossman et. al., 2017). Guidance must include conversation related to diet and exercise (Kirk et. al., 2017; Kumar & Kelly, 2017; Pate et. al., 2015). PCPs should also aggressively include other interventions that show promise in combating childhood obesity, especially those that focus on the younger age groups where a better return on investment may occur. In particular, extra attention and study has focused on how the first 1,000 days of life affects childhood obesity (Baidal et. al., 2015; Friis et. al., 2016). For instance, an intervention that included group-teaching sessions educating first-time mothers on protective, complementary feeding practices showed that the effects of teaching were sustained up to five years of age and correlated with lower child BMI z-scores (Daniels et. al., 2015). Also, since we know that the obesity epidemic disproportionality effects children from low socioeconomic (SES) households, PCPs should be encouraging and supporting breastfeeding

and healthy eating practices for infants and children in low SES families (Gibbs & Forste, 2013; Lumeng et. al., 2015; Tester et. al., 2018).

Although incidence is highest in the youngest children, this does not mean that adolescents should be overlooked. Prevalence of adolescents who were overweight or obese increased from 30.4% (between 1999-2000) to an astounding 41.5% (between 2015-2016) (Skinner et. al., 2018). Since 2002, obesity rates have increased for the disadvantaged youth of families of lower SES status and decreased for those of higher SES (Frederick, Snellman, & Putnam, 2014). Since prevalence is so high, it cannot be expected that all adolescents be referred to a subspecialist for treatment. However, evidence-based practice might include follow-up in clinic to address being overweight using motivational interviewing techniques (Resnicow et. al., 2015).

From a macro-system perspective, the United States must tackle this epidemic via public policy changes in insurance coverage, better reimbursement for preventative care, different payment models, and tax changes. The provider questionnaire corroborates recent literature that lack of reimbursement for childhood obesity treatment services acts as a barrier to the USPSTF standards of care for children who are obese (Wilfey et. al., 2017). A way to budget for the increased cost of preventive care, as well as prevent excess weight gain, would be to implement sugar-sweetened beverage excise taxes and eliminate tax subsidies for advertising and growing unhealthy foods (Gortmaker et. al., 2015). With the recent cuts in the supplemental nutrition assistance program (SNAP), it will also be important to make sure that children and families have healthy food options in their neighborhoods that are accessible and affordable (Ludwig, 2018).

This study had limitations. Despite having a drawing for a gift card, the survey had a very low response rate of 13.2%. Also, having performed a retrospective chart audit, it was not possible to contact families and gather qualitative data like barriers to seeking further treatment or quantitative data like prior BMI data points that could have been used to quantify when incidence of obesity occurred.

Table 1 – Demographics

	<i>n (%) or Mean (SD)</i>
Age	
6-7	26 (18.6%)
8-9	23 (16.4%)
10-11	23 (16.4%)
12-13	23 (16.4%)
14-15	22 (15.7%)
16-17	23 (16.4%)
Gender	
Male	68 (48.6%)
Female	72 (51.4%)
Race/ethnicity	
White	52 (37.1%)
AA	45 (32.1%)
Hispanic	37 (26.4%)
Other	6 (4.3%)
Insurance	
Private	21 (15.0%)
Public	119 (85%)
Weight Class	
Overweight	46 (33.9%)
Obese	94 (67.1%)
BMI Percentile	95.56 (3.63)

Table 2 – Assessment frequencies by overweight versus obese

	Overweight <i>n (%)</i>	Obese <i>n (%)</i>	Total <i>n (%)</i>
	Subset Total <i>n</i> = 46	Subset Total <i>n</i> = 94	Sample Total <i>n</i> = 140
Diagnosis in assessment	8 (17.4%)	65 (69.1%)	73 (52.1%)
Plan of care in note	6 (13%)	63 (67%)	69 (50.7%)
Referral made	1 (2.2%)	26 (27.7%)	27 (19.3%)

Table 3 – Assessment frequencies by age group

	6-7 n (% of group)	8-9	10-11	12-13	14-15	16-17
Diagnosis	11 (42.3%)	10 (43.5%)	13 (56.5%)	13 (56.5%)	12 (54.4%)	14 (60.9%)
Formal plan	10 (38.5%)	12 (52.2%)	11 (47.8%)	12 (52.2%)	12 (54.5%)	12 (52.2%)
Referral	2 (7.7%)	4 (17.4%)	4 (17.4%)	5 (21.7%)	9 (40.9%)	3 (13%)

Table 4 – Barriers to diagnosing children as overweight or obese

Time available for counseling	4 out of 5
Loss of motivation from frustration by patient's response to prior efforts	3 out of 5
Lack of reimbursement	2 out of 5
Access to competent tertiary care provider for severe cases	2 out of 5
Limited training related to overweight and obesity management	0 out of 5
Concern about damaging a child's self-esteem or hurting their feelings	0 out of 5
Concern about the development of eating disorders like anorexia	0 out of 5

Conclusion to Final DNP Project

Kevin J Pinto

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Childhood obesity is an epidemic that has seen increasing rates since the nineteen-seventies. As recommended by the USPSTF, PCPs need to screen and diagnose children six years and older. Since a large incidence of childhood obesity occurs within the younger age groups, it is also important for PCPs to be proactive in early diagnose and intervention for children who are overweight that includes follow-up appointments.

Considering the substantial amount of contact hours recommended to see significant changes in BMI (26), it is important that multidisciplinary specialty clinics be developed throughout the United States that have the ability to work with the child and family for prolonged periods of time focusing on all aspects of lifestyle modification (i.e. exercise and nutrition). Such clinics need components like dieticians, physical therapists, and mental health subspecialists who can work on different components of health in a comfortable space to facilitate behavior change.

Appendix A

Variable Name	Description	Level of Measurement	Statistical Analysis
Age	Age in years	Interval/Ratio (6-17 years old)	Means (SD), t-tests
Gender	Male vs Female vs Other	Nominal	Frequencies, Chi-square
Race	White, Black, Hispanic, Other	Nominal	Frequencies, Chi-square
Type of Health Insurance	Public vs Private	Nominal	Frequencies, Chi-square
Height	Documented height on day of well-child check	Ratio	Means (SD), t-tests
Weight	Documented weight on day of well-child check	Ratio	Means (SD), t-tests
BMI	Body mass index	Ratio	Means (SD), t-tests
BMI Percentile	AEHR calculated body mass index percentile	Ratio	Means (SD), t-tests
Age of Obesity Onset	Age of child when obesity BMI reached based on growth charts, if available	Interval/Ratio (2-17 years old)	Means (SD), t-tests
Weight Related Diagnosis in the Problem List	Morbid obesity due to excess calories; other obesity due to excess calories; obesity, unspecified; overweight	Nominal	Frequencies, Chi-square
PCP Assessment Diagnosis of Overweight or Obesity	Official diagnosis of childhood overweight or obesity in the assessment (yes vs. no)	Nominal	Frequencies, Chi-square

PCP Plan for Overweight or Obesity	Specific plan for childhood overweight or obesity in the plan section of their note (own bullet point or sentence addressing issue, excludes "appropriate guidance and counseling provided" (yes vs. no)	Nominal	Frequencies, Chi-square
Referrals for Overweight or Obesity	Sub-speciality Referral for childhood overweight or obesity in the plan section of their note (yes vs. no)	Nominal	Frequencies, Chi-square

Appendix B

1. What is your gender?

☐ Male

☐ Female

2. What is your age?

• _____

3. How many years have you been in practice?

• _____

4. Which of these factors act as barriers to diagnosis of overweight and obesity in your clinic? (select all that apply)

☐ Limited training related to overweight & obesity management

☐ Time available for counseling

☐ Lack of reimbursement

☐ Access to competent tertiary care providers for severe cases

☐ Loss of motivation from frustration by patient's response to prior efforts

☐ Concern about damaging a child's self-esteem or hurting their feelings

☐ Concern about the development of eating disorders like anorexia

☐ Other: please specify _____

5. Which of these factors act as barriers to the creation of a plan of care for obese or overweight children in your clinic? (Select all that apply)

- ☐ Limited training related to overweight & obesity management
- ☐ Time available for counseling
- ☐ Lack of reimbursement
- ☐ Access to competent tertiary care providers for severe cases
- ☐ Loss of motivation from frustration by patient's response to prior efforts
- ☐ Concern about damaging a child's self-esteem or hurting their feelings
- ☐ Concern about the development of eating disorders like anorexia
- ☐ Other: please specify _____

6. At what age do you feel it is appropriate to begin discussing a plan of care for overweight and obesity?

- ☐ _____

7. Please describe the barriers in your clinic that influence the care provided to children who are overweight & obese:

8. How likely are you to address the diagnosis of overweight or obesity at well visits, without setting up follow-ups specific to monitoring for changes in BMI?

- ☐ Not likely
- ☐ Somewhat likely
- ☐ Very likely

9. How likely are you to provide written information or educational materials on obesity and weight loss?

- ☐ Not likely
- ☐ Somewhat likely
- ☐ Very likely

10. How likely are you to create a follow-up appointment for a child for the diagnosis of overweight or obese?

- ☐ Not likely
- ☐ Somewhat likely
- ☐ Very likely

11. How many contact hours do you think is sufficient to begin to significantly influence BMI in a child that is overweight or obese?

- ☐ _____

12. How likely are you to refer to the UK Pediatric High BMI clinic?

- ☐ Not likely
- ☐ Somewhat likely
- ☐ Very likely

13. How likely are you to refer to the UK Pediatric Nephrology Clinic concerning hypertension related to being overweight or obese?

- ☐ Not likely
- ☐ Somewhat likely
- ☐ Very likely

14. Please describe the facilitators in your clinic that influence the care provided to children who are overweight & obese:

15. What changes would you like to see within UK Healthcare to help provide better care to children and families dealing with being overweight or obese?

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